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ABSTRACT

This paper highlights information about and suggestions for improving vocational education in the comprehensive high school that was synthesized from testimony at an American Vocational Association (AVA) hearing. An introduction describes the comprehensive high school, discusses some recent assessments of secondary vocational education, and lists the witnesses providing their testimony and submitting statements to the AVA Board of Directors at the hearing. The substance of these statements is organized and presented in three sections that focus on (1) the functions performed by and the positive value of vocational education programs in the comprehensive high school, (2) deficiencies of these programs and opportunities for qualitative improvement, and (3) courses of action proposed to correct recognized deficiencies and to enhance the quality of vocational education in the comprehensive high school. Criticisms of secondary vocational education are classified into five categories: inadequate collaboration between secondary and postsecondary education, lack of coordination with other modes of providing occupational education, failures in providing vocational education for special needs students, inability to be a responsive system, and lack of integration between general and academic curricula. Lines of action are suggested for the areas of criticism. (YLB)

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Highlights of the Hearing

on

VOCATIONAL EDUCATION IN THE COMPREHENSIVE HIGH SCHOOL

Held by the Board of Directors of the

American Vocational Association

December 2, 1982, St. Louis, Missouri

Prepared by

Henry David

American Vocational Association

1983

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TABLE OF CONTENTS

TABLE OF CONTENTS..... i

FOREWARD..... ii

I. INTRODUCTION..... 1

Some Recent Assesments..... 2

The AVA and Vocational Education in the Comprehensive High School..... 5

The December 2, 1982, Hearing..... 7

Highlights of the Hearing..... 12

II. VOCATIONAL EDUCATION IN THE COMPREHENSIVE HIGH SCHOOL: FUNCTIONS AND VALUES..... 13

Problems of Assessing Effectiveness..... 15

Research Findings..... 16

Warning Notes..... 19

III. DEFICIENCIES AND OPPORTUNITIES FOR IMPROVEMENT..... 20

Main Themes of Criticism..... 21

Assessing the Criticism..... 26

IV. CORRECTING DEFICIENCIES AND IMPROVING THE QUALITY OF VOCATIONAL EDUCATION IN THE COMPREHENSIVE HIGH SCHOOL..... 28

Suggestions for Action..... 29

FOREWARD

A year has passed since the AVA Board designated the comprehensive high school as the particular vocational setting for detailed examination. This was the first of a series of settings selected for special attention and there were serious reasons for choosing to begin with the comprehensive high school; these are clearly described in Dr. Henry David's paper which follows.

The importance of vocational programs in general and comprehensive high schools cannot be minimized. Quality programs at the secondary level can impact positively our nation's employment, defense, and economic well being as well as provide relevant contexts in which students can learn truly basic skills. Vocational education is and should be an integral part of the comprehensive high school, as is the comprehensive high school with its positive and negative attributes—integrally intertwined with its vocational programs.

But this relationship and the functions of both the comprehensive high school and vocational education cannot be taken for granted. We must continue to examine critically our assumptions and practices if changes are to be made and situations improved. The first step in this process is the careful study of the phenomenon which is vocational education in the comprehensive high school and of the total context which surrounds it, while questioning why things are done as they are and suggesting better ways for doing them.

It is only through this study and through the identification and articulation of salient issues and approaches that actions may be formulated for making improvements. And, it is only through specific actions based upon this thoughtful study that positive changes will be made. This is the purpose of this paper and the other activities of which it is a part.

It is hoped that the issues raised in the paper—the problems outlined, the questions asked, and the solutions suggested—will promote further dialogue and, finally, positive action. Essential participation in this dialogue and in resultant action are all those who have a stake in good vocational education in good comprehensive high schools: educational leaders, public officials, labor and industry, parents and teachers, students and the public at large.

Thus, this is a only beginning, but an important beginning. These are not all the issues, nor all the problems, nor all the possible solutions. However, we hope that the dialogue it represents will continue until clearer issues are identified, problems articulated, actions undertaken — and vocational education in the comprehensive high school improved.

On behalf of the American Vocational Association, I want to thank those who contributed their ideas to this paper and especially to Dr. Henry David who so skillfully examined and synthesized them. However, I want to stress one final time that this appreciation will be insincere unless we all continue what they have so thoughtfully begun.

Gene Bottoms
Executive Director
American Vocational Association

June, 1983

I. INTRODUCTION

The comprehensive high school is a major dimension of the complex, diversified, and decentralized public school vocational education enterprise in the United States. Secondary level vocational education courses and programs of study account for the majority of so-called vocational students. Of these, about two-thirds are enrolled in courses below the eleventh grade or in consumer and homemaking education and industrial arts courses. Only about one-third of the so-called vocational education students are, therefore, enrolled in occupational programs of study.

It is conventional to classify the public institutions providing vocational education into seven types:1 comprehensive high school, vocational high school, secondary area vocational center, community college, technical institute, post secondary area vocational school, and other postsecondary institutions. Of these, the comprehensive high school is the most numerous vocational educational institution and accounts for a larger total number of vocational education enrollees than any other type.

Almost 24,000 high schools in the country offer some vocational courses, but only one-fourth of them offer vocational courses of study in five or more fields and can, consequently, be counted as "comprehensive" high schools. The range of secondary vocational programs made available to students in many of these high schools is greatly increased through the offerings of some 1250 area vocational schools and centers which they may attend on either a part- or shared-time basis. In addition, there are well over 200 specialized technical or vocational high schools in the nation's larger urban centers. These offer academic as well as to occupational programs and also are comprehensive secondary institutions.

Some Recent Assessments

Vocational education programs at the secondary level have played a historically important role in the acquisition and further development of occupational skills by workers in the United States. Moreover, as has been said, they constitute today an important dimension of the nation's large public vocational education enterprise. Yet, the role and utility of high school vocational education have long been questioned, and recently it has been the object of increasingly sharp criticism which claims that it is ineffective and therefore does not warrant continued support by the Federal government.

In a policy statement issued by the National Council on Employment Policy, "A Vocational Education Policy for the 1980s," the point is made that "there are reasons for believing that the vocational education system is playing a significantly positive role in our nation's human resource efforts." The statement also observes however that many specific programs could be vastly improved."[2]

In its 1979 report, Giving Youth a Better Chance: Options for Education and Work Service, the Carnegie Council on Policy Studies in Higher Education urged radical changes in the structure and programs of secondary education that would profoundly affect the conventional place of vocational education in the comprehensive high school. These proposed changes would include (1) putting "applied skill training in private shops (with the exception of clerical skills and home economics), when not moved to the postsecondary level;" (2) having the high schools concentrate on the "basic vocational (and academic) skills. . . of literacy and numeracy-and good work habits;" and (3) concentrating "most applied skill training at the postsecondary level and particularly in the community colleges. . . ."[3]

More recently, in January 1983, the Governor's Commission on Secondary Schools for the state of Florida concluded in its report on Secondary Education:

A Report to the Citizens of Florida, that a "radical restructuring" of secondary vocational education is necessary. It recommends, on the basis of a misreading of limited evidence and untested assumptions, that "all" high school "vocational courses which research has shown to be of doubtful value should be eliminated." The Report recommends further that "classroom and shop vocational education at the high school level should be deemphasized in favor of programs that take the student into the community where training is conducted under employer auspices. Types of training include apprenticeship, work experience programs and, cooperative training."[4]

In Texas, dissatisfaction with the fruits of "a fragmented structure of vocational-occupational education" led the legislature to adopt a concurrent resolution October 1981 requesting the State Board of Education to arrange for the conduct of a study by an independent organization "to make recommendations . . . regarding a comprehensive state occupational program." Such a study was conducted by the Research Triangle Institute. While it did not focus on vocational education in the comprehensive high school, the study report[5] makes it clear that secondary vocational education cannot be properlay assessed apart from the other modes of providing occupational education and training.

From this perspective, the study found that high school vocational education in Texas suffered from deficiencies that would require state legislation of a far-reaching nature to correct. Thus, the report recommends that "work skills education as a secondary level subject should be offered within a statewide curriculum framework that provides for the developmental acquisition of work skills." This is to be accomplished through "a staged sequence" of courses "beginning grades seven and eight" where the subject matter would deal with "work orientation and exploration." Instruction in "general vocational capabilities" would be offered in grades nine and ten, and preparation for

"occupational clusters" in grades eleven and twelve. Not until grade 12 are courses to be offered preparing students for "specific" occupations.

The deficiencies with which secondary education in the United States is being charged constitute by definition criticisms of comprehensive high schools. At the same time, the inadequacies marking vocational education programs in many comprehensive high schools are one source of the weaknesses of secondary education. From both within and without the vocational education community comes the justified criticism that many high schools cannot properly claim to be comprehensive in light of the limited range of programs they offer. Data reported in the National Center for Education Statistic's The Condition of Vocational Education indicate that opportunities for choosing among numerous programs are not available to a large proportion of 11th and 12th grade high school students. Similarly, many so-called "comprehensive" high schools fail to provide the opportunities for vocational education to the variety of special needs students they are supposed to serve.

Effective articulation between secondary and postsecondary vocational education is still a goal to be reached throughout the country, and the integration of academic and vocational programs at the high school level remains far more a subject for discussion than a demonstrated achievement. There is also general agreement, that occupational counseling in high schools has not yet reached a satisfactory state. In spite of efforts over the past two decades to reduce, if not to eliminate, the grounds for the charge, secondary vocational education as a whole can still be taken to task for not being sufficiently responsive to changes in local, regional, and national economies, in technology, in labor market demand and supply relationship, and in occupational skill requirements. Certainly, there is evidence that vocational education at the high school level is

laggard in effecting needed changes in programs offerings, curricula, equipment and facilities, and teacher preparation. To the extent that this occurs, high school programs not only do students a disservice but also represent a misallocation of all-too-scarce resources.

The AVA and Vocational Education in the Comprehensive High School

The leadership of the American Vocational Association has been aware of documented weaknesses in vocational education in the comprehensive high school, as well as of its functions and positive achievements. The AVA has sought to remedy the ills of secondary vocational education and to encourage advances in its quality. At the same time, it has endeavored to encourage a better public understanding of the actual and potential accomplishments of vocational education in the comprehensive high school.

One expression of the AVA's efforts along these several lines is the September 1982 issue of the AVA's journal, VocEd, which is devoted to the theme, "Voc Ed in the Comprehensive High School." This issue features articles explaining the place and functions of vocational education at the secondary level by Rupert N. Evans and Gordon I. Swanson, accounts of exemplary high schools and vocational education programs, and short stock-taking pieces on the subject matter areas and support services of vocational education. All these are, understandably, positive in their stance toward secondary vocational educational education, but they also indicate, both directly and indirectly, the variety of improvements that can and should be made in its programs and outcomes. They reinforce the point made by the AVA's Executive Director: "No vocational education program is so good that it can't be improved. It is true that some of the factors that improve vocational student outcomes lie outside of vocational program influence. But a large

part of potential influence lies within the control of vocational teachers and their curriculum."[6]

In addition, the September 1982 issue also contains an article critical of the quality of vocational education in most comprehensive high schools when evaluated in the light of three criteria: "comprehensiveness and depth of instruction; closeness to industry; and flexibility in responding to local labor market demands." The author suggests "that quality of vocational education, certain exceptions notwithstanding, is higher when administered outside the local high school." He argues not for doing away with secondary vocational education because of its qualitative deficiencies but for recognizing "that the kind of administrative context to which vocational programs are subject in comprehensive high schools makes for special difficulties in achieving quality."[7]

A second expression of the AVA's concern with the state of vocational education in the comprehensive high school is the decision by its Board of Directors to devote a full day, December 2, 1982, on the eve of its annual convention in St. Louis to a hearing on that theme. In response to invitations from AVA's Executive Director, 15 witnesses appeared before the Board in a hearing chaired by Charles A. Hopkins, President of the AVA. In addition, another eight statements dealing with high school vocational education were submitted in writing to the Board.

The purposes of the hearing were simple and clear: (1) to stimulate consideration and discussion of this dimension of the vocational education enterprise by the membership of AVA; (2) to produce additional information about vocational education in the comprehensive high school; and (3) to elicit from the oral and written testimony suggestions for ways of improving high school vocational education programs.

A third expression of AVA's concern is its decision to convene a national conference, June 16-18, 1982, on Vocational Education in the Comprehensive High School. The purpose of this conference for which the Board of Directors hearing was preparatory, is to build "an action agenda for improving vocational education in American High Schools."

The December 2, 1982, Hearing

The testimony presented to the Directors of the AVA represented in 20 instances the views of individuals. Three witnesses testified on behalf of organizations: The American Association of School Administrators, the National Association of Secondary School Principals, and the American Industrial Arts Association.[8] Those participating in the effort came from 14 states and the District of Columbia occupying posts ranging from that of high school classroom teacher to university professor and to state education official. The diverse subjects they treated have a common concern with improving the quality of high school vocational education in the future.

Testimony and Statements Submitted to the AVA Board of Directors

JAMES D. ATHEN. Director, Career Education, Iowa State Department of Public Instruction.

- "An Adequate Program of Funding for Secondary Vocational Education in the Comprehensive High School Setting "

*DONALD F. AVERILL. Coast Community College District, Costa Mesa, CA

- "Toward the Comprehensive High School: The Desired Relationship between Secondary and Postsecondary Education"

GAIL T. BARTOW. Superintendent, Blue Springs, MO. Testimony submitted on behalf of the American Association of School Administrators, of which Superintendent Bartow is President-Elect.

- "The Future of Vocational Education in the Comprehensive High School"

HENRY DAVID. Consultant. Formerly, Director of the National Institute of Education Study of Vocational Education.

- "Vocational Education Programs in Comprehensive High Schools: Evaluation Research - Past and Prospective"

*WARNER DICKERSON. Assistant Commissioner, Department of Vocational-Technical Education, Tennessee Department of Education.

- "The Desired Future Relationship between Secondary and Postsecondary Education"

*WILLIAM E. DUGGER, JR. Professor, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University.

- "The Role of Industrial Arts in Vocational Education"

ELAINE FREE. Secondary Vocational Education Director, Irving Independent School District, Irving, TX.

- "Desired Outcomes of Vocational Education in the Comprehensive High School"

*Designates individuals who did not testify on December 2, 1982, but submitted statements subsequently.

JOAN E. GAY. Chairman, Home Economics Department, Colquitt County High School, Moultrie, GA.

- "Pursuing Excellence in Instruction in Vocational Education"

*JAMES E. GOOD. District Supervisor, Vocational and Technical Education Greece Central School District, North Greece, NY. Testimony submitted on behalf of the American Industrial Arts Association.

- "Vocational Education in the Comprehensive High School"

DARYL J. HOBBS. Director, Office of Rural Development, University of Missouri-Columbia and BOB R. STEWART, Professor, Agricultural Education, University of Missouri-Columbia.

- "Vocational Education in the Comprehensive High School: More Comprehensive and Intensive"

ROBERT C. HOWE. Principal, North Kansas City High School, North Kansas City, MO. Testimony submitted on behalf of the National Association of Secondary School Principals of which Mr. Howe is President-Elect.

- "The Future of Vocational Education in the Comprehensive High School: A Principal's Eye View"

DANIEL M. HULL. Center for Occupational Research and Development, and LENO J. PEDROTTI. Center for Occupational Research and Development, Waco, TX.

- "Identifying and Strengthening the Scientific and Technical Literary Skills of Secondary Vocational Education Graduates"

JAMES P. LONG. Senior Research and Development Specialist, the National Center for Research in Vocational Education, The Ohio State University, Columbus, OH.

- "High Technology and Vocational Education Instruction in the Comprehensive High School"

LINDA S. LOTTO. Assistant Director for Planning, The National Center for Research in Vocational Education, The Ohio State University, Columbus, OH and ROBERT E. TAYLOR, Executive Director, The National Center for Research in Vocational Education, the Ohio State University, Columbus, OH.

- "Achieving Excellence in Vocational Programming in Comprehensive High Schools"

CLYDE MATTHEWS. Supervisor, Special Programs, Vocational and Technical Education, Oklahoma State Department of Educaton.

- "Strategies for Improving Vocational Education Outcomes with Special Needs Students Through the Comprehensive High School"

CLYDE F. MAURICE. Florida State University, Tallahassee, FL.

- "Improving Vocational Education in the Comprehensive High School through New Planning Approaches

ROBERT MULLEN. Deputy Director, Division of Vocational Education, North Carolina State Department of Public Instruction.

- "Increasing Comprehensive High School Responsiveness to Changing Labor Market Demands and Requirements"

*JANICE R. SANDIFORD. Associate Professor, Division of Vocational Education, School of Education, Florida International University, Ft. Lauderdale, FL and HAZEL DOVE. Graduate student, Florida International University, Ft. Lauderdale, FL.

- "Pursuing Excellence in Vocational Education Instruction"

C. PAUL SCOTT. Associate Professor, Division of Vocational Education, College of Education, The University of Georgia, Athens, GA

- "Articulation: New and Used Views of the Relationship Desired between the Comprehensive High School and Postsecondary Vocational-Technical Education"

DAVID L. SMITH. Chief Executive Officer, North Orange County Regional Occupational Program, Anaheim, CA.

- "Alternative Governance Structures for Improving Vocational Education in Comprehensive High Schools"

*ROSALIE I. TULL. Cooperative Office Education Coordinator, Belaire High School. President-Elect, Louisiana Vocational Association.

- "Vocational Education in Secondary Schools—Meeting the Challenge of the Future"

*JED W. WASDEN. Coordinator, Secondary Programs, Vocational Education, Utah State Office of Education.

- "To be or Not to Be (Comprehensive)"

*WILLIAM K. WOLFE. Director, Wisconsin Association for Vocational and Adult Education

- "The Future of Vocational Education in the Comprehensive High School"

Highlights of the Hearing

It was originally thought that the statements prepared for the hearing would be published verbatim. Considerations of costs and the desire to make the suggestions for improvement as widely and readily available as possible led to abandoning this plan. It was decided instead to publish a paper on Highlights of the Hearing on Vocational Education in the Comprehensive High School Held by the Board of Directors of the American Vocational Association as a more effective way of realizing the purposes to be served by the hearing.

The AVA is, of course, sensitive to the losses associated with this decision: the full flavor of the point of view, of the line of argument, and of the details of each statement would not be available. On the other hand, it had reason to hope that there would be compensating gains arising from the wider distribution of their key ideas, information, and suggestions for practical action. The AVA will, of course, maintain for inspection a file of the statements submitted to the Directors.

In the following sections of this paper, the substance of the statements is organized and presented in the form of answers to these broad questions:

1. What are the functions performed by and what are the positive values of vocational education programs in the comprehensive high school?
2. What are the deficiencies of these programs and in which respects are they susceptible to qualitative improvement?
3. What courses of action are proposed to correct recognized deficiencies and to enhance the quality of vocational education in the comprehensive high school?

II. VOCATIONAL EDUCATION IN THE COMPREHENSIVE HIGH SCHOOL: FUNCTIONS AND VALUES

As might be expected, no testimony was offered that questions the functional utility of secondary vocational education as a whole or of vocational education programs in comprehensive high schools in particular. So much was the place of vocational education in the high schools taken for granted, that the issue of its functions and values, where explicit, were dealt with in only a few papers. However, the emphasis in the statements was upon approaches to improvement. In view of the variety of claims made for the benefits produced by secondary vocational education, it is worth noting no witness said, as has been frequently asserted, that it contributes to reducing poverty, youth unemployment, and juvenile delinquency. When they do deal with questions of function and worth, the statements argue that vocational education in the comprehensive high school performs several important functions.

First, it provides an alternate program of study for the substantial fraction of high school students who do not intend to go on to college and who, presumably, would have little or no interest in pursuing a wholely academic curriculum. In doing so, vocational curricula serve to expand the range of educational opportunities for the young and may contribute significantly to holding a high proportion of students in school through to graduation. In this respect, since dropouts do less well in the labor market than high school completers, the availability of an alternative vocational curriculum, which leads to more schooling, increases the chances of employment for new entrants into the labor force, quite apart from the

contribution that a vocational program may make to the acquisition of employability and occupational skills.

A second function performed by secondary vocational education, also serves to contribute to the realization of more equal opportunities even though the performance record remains partial and disappointing in light of the ideal sought. This function is sharply expressed in the charge given to vocational programs, primarily by Federal legislation, to serve the special educational needs of students who are disadvantaged by disabilities of an economic, cultural, physical, emotional, and intellectual nature. Here, the objective is to reduce the chances that such individuals will remain grossly and, perhaps, irreversibly, handicapped throughout life in developing their potentialities and in making a living.

A third function of secondary vocational education mentioned in the statements is to provide students with the knowledge and skills needed to take and hold entry-level jobs. This function is also represented in other ways, such as: (1) providing students with an opportunity to acquire "saleable" occupational skills; (2) preparing them for the world of work with employability skills, including sound work habits and values; or (3) providing them with a foundation for further occupational training on the job. This last representation of function is linked to a fourth purpose fulfilled by secondary vocational education—to prepare students for pursuing further occupational education and training at the postsecondary level.

It is worth emphasizing that the comments on function are singularly student-oriented. That is to say, the functions are defined in terms of what vocational education in the comprehensive high school could or does actually accomplish for students. Virtually no mention is made of the role

it plays in helping to shape the quantitative and qualitative characteristics of the nation's labor force. Nor is the actual or potential role it might play in connection with economic development or productivity—two subjects given much attention in current discussions of vocational education—given prominence. In one instance, however, the point is made that an argument to be made for overcoming a community's reluctance to provide adequate funding for vocational education is that a skilled workforce is essential for its economic growth and vitality.

It is understandable that those who testified and submitted statements take the values of secondary vocational education for granted. Only occasionally do they refer to the postive evaluations registered by employers of its programs and graduates and to the continuing approval by the states and localities of vocational curricula in the high school. At the same time, there is an undercurrent of explicit recognition that it is difficult to demonstrate the effectiveness of secondary vocational education programs. This is so for several reasons.

Problems of Assessing Effectiveness

The criteria used in assessing effectiveness are several and are, therefore, frequently disputed. The evidence hearing on questions of effectiveness is generally inconclusive, sometimes conflicting, and rarely compelling. Exactly what the effects of comprehensive high schools are upon their students has long been a matter of debate. The observation made by one witness that the comprehensive high school itself may provide the optimal setting for coordinating key elements of the academic and vocational curricula does not appear to have been realized in fact.

If one asks whether the research conducted to date shows that the graduates of vocational curricula have decisively better chances for employment and

higher earnings than those of nonvocational curricula, one should be prepared for an ambigious, if not a negative response. It is not suprising that it has been difficult to find out what difference one aspect of the educational experience in a comprehensive high school — that represented by a vocational curriculum — makes to learners. The Final Report on the National Institute of Education's congressionally-mandated Vocational Education Study points out that

> not all the effects of participating in a curriculum cannot readily be disentangled from factors that originally led students to select that curriculum. Moreover, factors other than curriculum influence the economic and noneconomic experiences of learners after their years in school. The family background and cognitive ability of learners, the places in which they may live, the quality of their schools, and labor market conditions all influence learners' subsequent attainments. Knowledge of the effects of vocational education on participants is further limited by the difficulties of classifying students as vocational, identifying a comparable group of nonvocational students with whom to contrast vocational students, the diversity of programs in different occupational specialty areas, and the lack of information on certain outcomes of the vocational education experience.[9]

Research Findings

There is considerable evidence showing that both white and black female graduates from business and office programs do much better in the labor market than white and black female graduates of the general program. They do better with respect to employment, earnings, and occupational status. The differences between male graduates of high school vocational programs and of general programs are not as marked. Evidence provided by research on one body of longitudinal data shows that

> One year after graduation, 53 percent of white and 43 percent of black male graduates of trade and industry programs—the occupational specialty

> with the largest male enrollment—are employed in jobs related to their training. White male graduates of trade and industry programs are employed a few weeks more in the first year of work than white male general curriculum graduates, and white male graduates of business programs have jobs with slightly higher occupational status one year after graduation than white male graduates of the general curriculum; however, these differences are not as marked four years after graduation.[10]

If the white male graduates of all vocational programs are compared with the white male graduates of the general curricula, with neither group having had any postsecondary education, the differences between them are relatively slight with respect to their labor force participation and unemployment rates, their weekly earnings, and their chances of being employed in skilled jobs.

Research on the effects of participating in secondary vocational education programs using different methodologies and different data bases do not show, as has been noted, similar results. This, of course, confounds efforts to determine just what their effects upon students are, and, consequently, their functional utilities. Thus, while the subsequent employment opportunities for vocational education students as a whole may not be significantly greater than for non-vocational student's there is also evidence that the likelihood of employment is positively associated with the intensity of concentration in vocational education programs.[11] There is strong evidence that secondary vocational education prepares students for relatively low prestige and low paying jobs, and also that race and sex are more closely associated than curriculum with the subsequent employment status of students.[12] This should not be surprising, for the programs offered mainly serve to prepare students for semi-skilled rather than skilled work, and some two-thirds of all vocational education enrollees are not enrolled in occupationally-specific programs. However, there is also evidence that positive earnings effects are found associated with male marketing and trade and female business and trade graduates.[13] Still

another study found that both work experience in high school and academic performance are strongly related to subsequent employment, but that "high school vocational training" had no significant effects upon the "yearly labor force experience" of students.[14]

Still another study using longitudiual data for a sample of students completing nine to 12 years of school and their school transcripts makes clear both the variety of effects associated with secondary vocation education and the dangers attending efforts to assign precise weights to the labor market consequences of participating in both vocational and nonvocational programs. This study defines vocational students as those taking three or more credits in a vocational program area. It found "that, in general, both academic and vocational curriculum have a significant positive impact on labor market success;" that a vocational curriculum has "stronger and more positive effects...on hours worked for men" than an academic curriculum; that an occupationally specific vocational program "does have pay-off in the labor market," but more decisively for men than for women, but "an occasional vocational course does not;" that the greater the relationship between the nature of the educational program and the job held, the higher the pay-off; that different programs differ in their pay-offs and do not have consistently positive effects on hourly earnings, hours worked, and unemployment; that vocational programs in office educations are associated with the "strongest" effects.[15] In light of the comparisons that are conventionally and constantly made between the later labor market effects upon learners of high school vocational and nonvocational curricula, it is worth noting that the scholars who conducted this study point out that "at least in theory it remains unclear whether differences in high school curriculum should lead to differences in labor market opportunities" for students.[16]

Warning Notes

It is essential to qualify the preceding account of what is known about the functions secondary vocational education in terms of the effects upon the later labor market and educational experiences of students who participate in vocational programs with an important cautionary observation. That is, that the little known about the economic and noneconomic effects of secondary vocational education in general upon individual learners does not provide information about the effects upon the graduates of vocational programs in different types of comprehensive high schools in particular. To this, another cautionary note must be added. The available information about effects upon individual learners should not be taken to constitute an assessment of the larger economic and social consequences of secondary vocational programs or of their cost effectiveness.

III. DEFICIENCIES AND OPPORTUNITIES FOR IMPROVEMENT

Those who responded to the plea to register their views about vocational education in the comprehensive high school had no fundamental doubts about its worth or about the usefulness of the functions it sought to perform. This did not mean, however, that they were complacent about its present state or indifferent to both the need and the opportunities for improving its performance. In one instance, there was even an explicit recognition that of all the forms of public vocational education the one that found in comprehensive high schools is the least effective.

At the same time, and serving in part to explain such an assessment, the point was made in one statement that the generic term "comprehensive high school" is misleading for it is a singular label used to classify educational institutions differing widely in size, program characteristics, resource base, and still other critical respects. "To be comprehensive for less than one hundred students in a high school of seventh through twelfth grades, in a rural area," this statement observes, is completely different from being comprehensive for a high school that has over three thousand students, tenth through twelfth grades from "the inner city" of a major urban center.

Nor did those who commented on the state of secondary vocational education reject popular perceptions of its deficiencies or hesitate to specify the respects in which it failed to achieve its declared objectives. Approving recognition was given to steps taken under state legislative leadership, as in California, to bring about corrective actions and improvements. The statements submitted are not reluctant to be critical of inadequacies of commission and commission or to urge secondary vocational education to strive for excellence. They call for remedying deficiencies and effecting improvements, but not for eliminating vocational education programs in the comprehensive high school.

This is true of one statement which identifies almost one dozen weaknesses, or sources of deficiencies found in secondary vocational education. These are: students are being taught outdated knowledge and skills; there is a strong tendency to dump less able students into vocational education programs; the curricula used are not competency-based; there is a lack of performance measures; evaluation of programs and institutions are too infrequent; misconceived criteria are used for evaluations; skills associated for the acquisition of jobs are not sufficiently taught; general education and vocational education curricula are separated instead of being integrated; supervision in vocational education is misdirected in so far as it centers on program preservation rather than improvement; and, finally, equipment and facilities are frequently obsolete or inadequate in other respects.

In indicating deficiencies and where and how improvements can be effected, those who testified and submitted written statements did not specify the standards against which practices are measured and found wanting. Yet, it is clear that the goals for vocational education set forth in the Declaraction of Purpose of the Vocational Education Act of 1963, as amended (in P.L.94-482) serve as reference points for judgements of this kind. Thus, one statement paraphrases in part the Declaration of Purpose of the Federal statute to define a "comprehensive vocational education system as one "capable of assisting all citizens to select, prepare for, and advance in occupations or careers of their choice which currently exist or are emerging.

Main Themes of Criticism

Without doing injustice to the wide range of specific criticisms made of secondary vocational education, it is both possible and safe to classify them into five categories: (1) inadequate collaboration between secondary and post-secondary education; (2) lack of coordination with other modes of providing

occupational education and training; (3) failures in providing vocational education for all special needs students; (4) inability to be a responsive system; and (5) lack of integration between with general and academic curricula. That the bulk of the shortcomings discussed by members of the vocational education community responding to the Board of Directors can be arrayed in this five-fold manner will not surprise anyone familiar with the field.

There have been continuing efforts in recent years, in which both the AVA and the American Association of Junior and Community Colleges have been active participants, to build bridges between the secondary and postsecondary levels of vocational educations. Nevertheless, the criticism is frequent that what is variously called collaboration, cooperation, or articulation between the two remains grossly inadequate. Advances have been made in collaboration and the means of effecting it in programmatic, curricular, and planning terms. Yet, the two levels operate largely as separate systems with consequent costs in the ineffective utilization of resources, in redundancy in program offerings and requirements, and in the narrowing of opportunities for students. It seems to be taken for granted that the different ways in which the secondary and postsecondary systems are governed and funded represent key obstacles to the development of rational mechanisms of collaboration or collaboration, and that the institutional differences between the two are not likely to be readily overcome. Nevertheless, the need to bring about effective cooperation between the two levels of vocational education is strongly emphasized in the agenda of improvements called for in the statements submitted to the AVA's Board of Directors.

A related weakness with which vocational education in the comprehensive high school is charged is the lack of coordination between it and the other means for providing occupational education and training. This criticism

argues, in effect, that secondary vocational education would be strengthened if it were both planned for and operated within the larger context of all the instrumentalities, both for public and private, through which individuals are prepared for the world of work and afforded opportunities to acquire and develop occupational knowledge and skills.

Implicit in this criticism is a change in outlook in at least part of the vocational education community. This may be represented as a diminuation in the preoccupation with particular educational "delivery systems," viewed as separate and autonomous, and the emergence of a concern with the variety of mechanisms and processes affecting human resource development. Thus, one statement argues the need to fashion new systems of governance in the public sector which will replace existing fragmented systems for providing vocational education and training with a unified system designed to "permit students to move through programs of training regardless of the delivery system." This notion, it may be noted, is in line with recommendations issuing from the 1982 study commissioned by the Texas legislature, mentioned in the Introduction, for establishing a "comprehensive state occupational program."

It may be suggested that both Federal vocational education and employment and training regislation calling for coordination between CETA and vocational education in planning and to a lesser degree in operation did exercise some influence over time in extending the horizon of vocational education officials, even though the coordination sought was at best only partially realized. It is worth recalling that P.L.94-482 was intended to encourage comprehensive planning by the states which would take into account "the use of all resources available to them for vocational education and manpower training."

That secondary vocational education does not assure equality of opportunity for <u>all</u> students constitutes the third critical theme. It is a common

complaint that students with special needs are still not fully and effectively served. Without explicitly saying so, many statements assert that the goal of Federal assistance to the states under the Vocational Education Act of 1963, as amended, remains to be realized. This is, according to the Act's Declaration of Purpose, to make it possible for "persons of all ages" needing to acquire or develop occupational skills, including "those with special educational handicaps" to have "ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training." The additional point is also made that secondary vocational education has been laggard in developing the specialized institutions and training techniques and methods esential to be effective with some special needs students.

The fourth critical theme is all too familiar—that vocational education in the comprehensive high school lacks the capacity to be responsive to the requirements of those it serves and to the stimuli for change in the larger environment in which it operates. One statement charges it with failing to be responsive to the needs of its products—that is, its students—as well as of employers in the private sector, of the postsecondary institutions in which many of its graduates pursue further education, and of the armed services.

On a more detailed level, vocational education in the comprehensive high school is taken to task for being slow in altering curricula and program offerings necessitated by changes in technology. No one expects secondary vocational education to be able to anticipate developments in technology that bear directly on changing labor market demands and on the knowledge and skill requirements of old and new occupations. However, there is a widespread conviction that it could and should be able to respond more quickly than it does

to such developments. The point is also made that its programming is all too frequently not attuned to the dynamics of the labor market. Even given the institutional barriers to effecting changes quickly in program offerings, teaching resources, and equipment and facilities, the statements suggest a widespread belief that high school vocational education is more remote from changing labor market conditions than it need be.

One statement makes the pointed charge that in light of the wide range of skill areas in demand in the labor market, vocational education programs in comprehensive high schools, and more particularly in such schools in rural areas, prepare large numbers of "students in a relatively small number of skill areas. . . . " It observes, for example, that rural high schools fail to offer programs to prepare students for a variety of entreprenueurial activities and service functions, including child care, transportation, and law enforcement. Moreover, in spite of the prominence of vocational agricultural programs and of the relatively heavy enrollments in them, many skills needed for agricultural activities are not being taught. The statement reports that there are no programs offered to prepare cattle buyers, parts specialists in farm machinery dealerships, or management personnel for cooperative exterprises.

These several criticisms bearing on the gap between high school vocational education program offering and the demands for skills in local, regional, and national labor markets bear out two observations made in the introduction. One is that many high schools offer such a limited range of programs that even though they are classified as "comprehensive" they have little claim in fact to be so designated. The second and related observation is that a large proportion of eleventh and twelfth grade students are in schools which do not provide them with opportunities to choose among a significant number of vocational programs.

The fifth critical theme, which is not as frequently registered as the others, holds that vocational education in comprehensive high schools is insufficiently integrated with key elements of the general and academic curricula. This, it is asserted, contributes to a lack of competency in the basic language and numeracy skills of vocational education graduates. These, it is said, are as essential to preparation for the world of work as the acquisition of occupational knowledge and skills. Moreover, it is noted that the relative indifference of secondary vocational education to academic and general subjects means that its graduates are not likely to be held accountable for competency in the basic skills. One statement observes that the kind of workers needed for today's and tomorrow's labor market are those who are "literate" in the sense of being "versatile" in language arts skills.

Although the subject of technology was touched on in several statements, it is worth noting that only one statement dealt explicitly with the issue of "the scientific and technical literacy skills of secondary vocational education students." It does this in the context of constructing curricula for "high technology" occupations. "Literacy" for students preparing for these fields entails competency in mathematics, physics, and communications, and the use of computers.

Assessing the Criticisms

These various criticisms of the weaknesses of vocational education were seriously made, and obviously, should be taken seriously. Each critical theme has a long history and has been voiced, for example, in the successive efforts made to redirect and reform secondary vocational education through Federal legislation over the past two decades. They reflect a recognition of the gap that exists between aspiration and achievement. Such a recognition of deficiencies or failures serves constructive ends.

However, it must also be understood that the identification of inadequacies and weaknesses in the statements submitted to the AVA Board of Directors are, with one exception, not accompanied by indications of their scale, intensity, or extent of distribution. What is said about the weaknesses of vocational education programs in rural high schools holds very widely, indeed. But one cannot say that all secondary vocational education is unresponsive to factors prompting change and adaptation or that, if the comprehensive high schools are in general laggard in being responsive, they are equally so on all counts.

It is known that strides have been made in effecting improved coordination in many communities between secondary and postsecondary vocational education, but the extent to which the boundaries between the two levels remain, so to speak, impermeable, is not conveyed by the statements. And so it is with each of criticisms made of vocational education in the comprehensive high school. The statements, in short, offer an inventory of ills, but not an accounting of their pervasiveness, or a measure of the extent to which they threaten the future of high school vocations. Nor do they suggest the scale of the effort required to cure the ills or speak to the prospects of remediation.

IV. CORRECTING DEFICIENCIES AND IMPROVING THE QUALITY OF VOCATIONAL EDUCATION IN THE COMPREHENSIVE HIGH SCHOOL

Overall, those who were critical of vocational education in the comprehensive high school were also optimistic about the chances of correcting the deficiencies they identified and of improving its quality. As one would expect from those associated with an educational enterprise that is highly diversified, decentralized, and localistic in its centers of authority and control, no single, all-purpose panaceas or grand strategies were offered to remedy its ills and effect improvements. The implication is clear: corrective action is necessary on a variety of fronts and uniformity in the measures to be used should not be expected because of differences among insitutions, school districts, systems of governance, availability of resources, and the like.

In effect, the statements invite examination of every dimension of the secondary vocational education enterprise to identify both the existence of weaknesses or inadequacies and the opportunities for improvement in quality. A catalogue of areas inviting inspection that can be extracted from the statements include the adequacy, sources, and utilization of funds; systems of local, state, and federal governance; administrative structures and behaviors; program offerings and curricula; facilities and equipment; instructional locations and methods; recruitment, training, and competency of teaching personnel; relationships with other educational curricula and with other means of providing occupational training; linkages with employers of vocational education students; and the nature of the investment in research and development and the utilization of the knowledge thus produced.

Some of the points made in the statements may be taken to represent prerequisites for remedial actions and improvements in the enterprise. One is the

presence of a widely-shared concern with the quality of the secondary vocational education enterprise and a desire to attain excellence. Without these, the drive for action to effect improvements will be weak and the will to work at the problem of establishing standards of quality will be lacking. A second is a structure of policies pursued at all three levels of government—local, state, and federal—supportive of program and school improvement. A third is the cultivation of a willingness to apply what has been learned from research about such matters as the factors that make for effective schools and learning situations, about learning in relation to class size, to hands-on experience, and to time spent on task. Fourth is a mentality that is not threatened by change. On this score, it is worth noting that several statements, instead of proposing remedial measures outline future vocational education systems designed to program students for the acquisition of occupational knowledge and skills without regard to existing delivery mechanisms.

Suggestions for Action

The lines of action for improving quality and remedying deficiencies suggested in the statements clearly draw upon a pool of established knowledge. It is safe to say that almost without exception they contain no surprises. But to say this is not to denigrate either their worth or practicality. It is also safe to say that for the most part they constitute noncontroversial and incremental solutions to long-recognized problems.

One exceptional note appears in a statement that warns of the potential danger to vocational eduction in the comprehensive high school in the current preoccupation with basic skills. Its author observes that

> If students are required to take more basic education courses or meet increased graduation requirements, it will tend to decrease the options students have for enrolling in elective courses. Students who may enroll in vocational courses will not and should not be exempt from such require-

> ments. The back-to-basics movement has not yet raided the pure vocational courses to any great degree, but it has made inroads into such areas as industrial arts, home economics and art. Increased requirements will, in time, cause an erosion of the numbers of students that have time for three-hour block courses in vocational subjects.

The counter to this prospect is for vocational educators to develop "'vocational basics' courses that parallel traditional English, for example, that can be legitimately substituted as the curricular requirements to meet the needs of students for graduation or . . . competency requirements as well as enhancing the total vocational program. It is my opinion" states the author, that vocational education has, in too many instances in practice if not in philosophy, scorned the basic subjects and should move back into step with the total curriculum as it is today."

The recommendations for action and for ways of enhancing quality in the statements for the most part spring from the criticism made. Thus, on the score of effecting articulation between secondary and postsecondary vocational education, the two levels are urged to make use of the several tested and successful models that exist for coordinating curricula, record keeping, and student transfer arrangements. Gains in cooperation that can be made through joint planning activities are stressed, especially when the planning takes into full account goal structures, the area to be served, the student populations, labor market characterisitcs, personnnel requirements, guidance needs, and the "particularities" of the local community.

Improvements in responsiveness, it is asserted, can be achieved when immediacy and flexibility are assigned high value. The point is made that high schools can become far more flexible institutions than they now are with respect to program modification and innovation, scheduling, and the use of mobile programs and of instructional facilities located outside of the school building. What is required is to put a premium on making reductions in the

response time to changes in factors that affect the operational behavior schools operates—in particular, labor market conditions, the technologies, of the production and consumption of goods and services, and population and labor force characteristics.

Clarification of the purposes of the high school and assuring that the so-called comprehensive high school is genuinely comprehensive, in the scope and relevancy of program offerings and in the opportunities for choice it affords students, will go a long way, it is asserted, to bring about improvements in quality.

One statement details the means by which even rural high schools can become far more comprehensive than they now are and provide a more intensive vocational curriculum. These means include specialization of and coordination between comprehensive high schools and area vocational centers designed to extend the range of programs offered; the sharing of instructional facilities and the pooling of transportation arrangements; district-wide sharing of teachers; and the use of local employers to operate forms of apprenticeship training. The point is also made, however, that, without change in the "traditional orientation of vocational educators," it is not likely that "vocational education in the comprehensive high school "can be made" more intensive and comprehensive.

It is widely assumed in the statements that, by forging stronger links with business and industry, secondary vocational education can improve its quality and correct its deficiencies. Such links may be created by making better use of advisory mechanisms in which business and industry are represented and through higher credibility could be given to programming and program changes. Other cooperative relationships between the two, it is asserted, could lead to improvements in facilities, teaching, and curricula. The opti-

mistic view is even expressed that it should be possible to fashion a full education partnership between vocational education and business and industry which would provide for students teachers from the workplace, training stations in industrial and business enterprises, up-to-date equipment, and effective supervision.

Improved quality, it is taken for granted, will require providing more resources to the schools in general and to vocational education in the comprehensive high school. While there is little hope that increased resources will be made available by the three governmental sources of funds for public education, there is also no disposition registered in the statements submitted to the AVA Board of Directors that more and better can be achieved for vocational education in the comprehensive high school for less. At the same time, however, it is said that there is good reason to believe that the pressure of limited resources may lead to adopting more economical ways of providing effective instruction. This occurred in one city when, instead of building a new central vocational school, three schools adopted specialized themes of vocational programming—for business, industrial, and service occupations—and having the classes in each open to students in the others.

Other routes to achieving improvements in quality, it was said, lie in broadening the terms of occupational education away from narrow, job-specific training to the education of vocatinal generalists; in more realistic and better informed programs of vocational exploration and guidance and counseling; in adopting the principle of individualized education plans for vocational students, particularly those with special needs; and in expanding programs for personnel development, both for teaching and other personnel in vocational education.

The notion that emerges from the comments on the actions to be taken to relieve secondary vocational education of its weaknesses and failures and to

lift its quality is that there is little mystery about what needs to be done and what, in fact, can be done. The problems lie in mustering resources, energy, and will for the doing. On this score, the point is made that a powerful stimulus for redirection and reform of vocational education in the comprehensive high school, not yet adequately used, lies in making a habit of periodic assessments of every aspect of the enterprise that bears upon performance, ranging from local and state planning through to the availability of resources and their use, to the competences acquired by students, to classroom procedures and methods of instruction.

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Notes

1. See, for example, The Interim Report on the Vocational Education Study (Washington, D.C.: U.S. Government Printing Office, 1980), pp. VI-46 ff.

2. The background material for this Policy Statement, issued in Washington in March 1982, was prepared by Rupert N. Evans and dealt with "The Role of the Federal Government in Vocational Education." The quoted sentences appear on p.1 of the Policy Statement.

3. Giving Youth a Better Chance (San Francisco: Losey-Bass, Inc. 1979), p. 24. See Chapters 6 and 7 which deal respectively with "Education for Work and Work as Education" and "Vocational Education: Change Everything, Including the Name."

4 Governor's Commission on Secondary Schools for the State of Florida, Secondary Education: A Report to the Citizens of Florida, January 1983, p. 65, but see the section, "Vocational Education: A Radical Restructuring Is Essential," pp. 59-73.

5. Research Triangle Institute, Final Technical Report - A Study to Make Recommendations Regarding a Comprehensive State Occupational Program (Research Triangle Park, N.C.: Research Triangle Institute, October 31, 1982).

6. Research Triangle Institute, Final Technical Report, pp. 120 ff.

7. Charles S. Benson, "The Question of Quality," ibid., p. 270

8. James E. Good who submitted this statement had earlier contributed an article to the September 1982 issue of VocEd on "Broad Support Leads to Excellence," pp. 33-35.

9. Washington, D.C.: U.S. Government Printing Office, 1981, pp. VI-1-2.

10. Washington, D.C.: U.S. Government Printing Office, 1981, pp. VI-1-2.

11. Paul B. Campbell et al., Employment Experiences of Students with Varying Participation in Secondary Education (Columbus, Ohio: The National Center for Research in Vocational Education, 1981), pp. IX-X.

12. The Final Report, op. cit., p. III-57 and pp. III-40 ff.

13. Donna M. Mertens and John A. Gardner, Vocational Education and the Younger Adult Worker (Columbus, Ohio: The National Center for Research in Vocational Education, December 1981), p. xxiii.

14. Robert H. Meyer and David A. Wise, "High School Preparation and Early Labor Force Experience," National Bureau of Economic Research Working Paper Series, Working Paper 342, Cambridge, Massachusetts, May 1979, pp. 1-2.

15. Russell W. Rumberger and Thomas N. Daymont, "The Economic Value of Academic and Vocational Training Acquired in High School," Institute for Research on Educational Finance and Governance, Stanford University, Project Report No. 82 - A23, September 1982, pp. 1-2, 12-16.

16. Ibid., p. 18.